



**Digora[®] for Windows[™]
DICOM Conformance statement
for DFW 2.5**

Version 1.07



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Digora for Windows
DICOM Conformance statement

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1. Introduction

1.1 Purpose

This document is the DICOM standard conformance statement for Digora[®] for Windows[™] (DFW) software product line. The Digora[®] for Windows[™] DICOM services are described in this document.

The reader of the document should be familiar with DICOM Standard's [1] terminology.

1.2 Scope

This document describes DICOM 3.0 functions implemented in the DFW system and specifies DFW system compliance to DICOM 3.0 standard [1].

1.3 Definitions, Acronyms and Abbreviations

Control Station PC with installed operation system and DFW software package intended for the control of DIGORA[®] imaging plate scanners, intra-oral cameras and other digital imaging devices.

DFW Digora[®] for Windows[™] software product line supplied by SOREDEX. The software is intended for controlling imaging plate scanning of the DIGORA scanners, digital image acquisition, dental images management, processing, viewing and archiving.

Other used acronyms and abbreviations are defined in [1].

1.4 References

[1] NEMA PS 3.1-3.16 Digital Imaging and Communications in Medicine (DICOM) v3.0, 2004.

1.5 Disclaimer

SOREDEX reserves the rights to make changes in the described DFW software architecture so that it will comply with the future evolution of the DICOM 3.0 standard. The system end user and his agent should ensure that equipment connected to the system also conforms to follow the future evolution of the DICOM 3.0 standard.

2. Implementation model

A single DICOM Application Entity (AE) handles all DICOM SCU functionalities of the DFW system. These functionalities are implemented in separate processes.

2.1 Application data flow diagram

Figure below depicts the application data flow and shows the relationship of the application entities to real-world activities for all services described within this document.

The local DICOM application entities handle all DICOM protocol communications. Service-specific data flow diagrams are included in the DICOM service-specific sections later in this document.

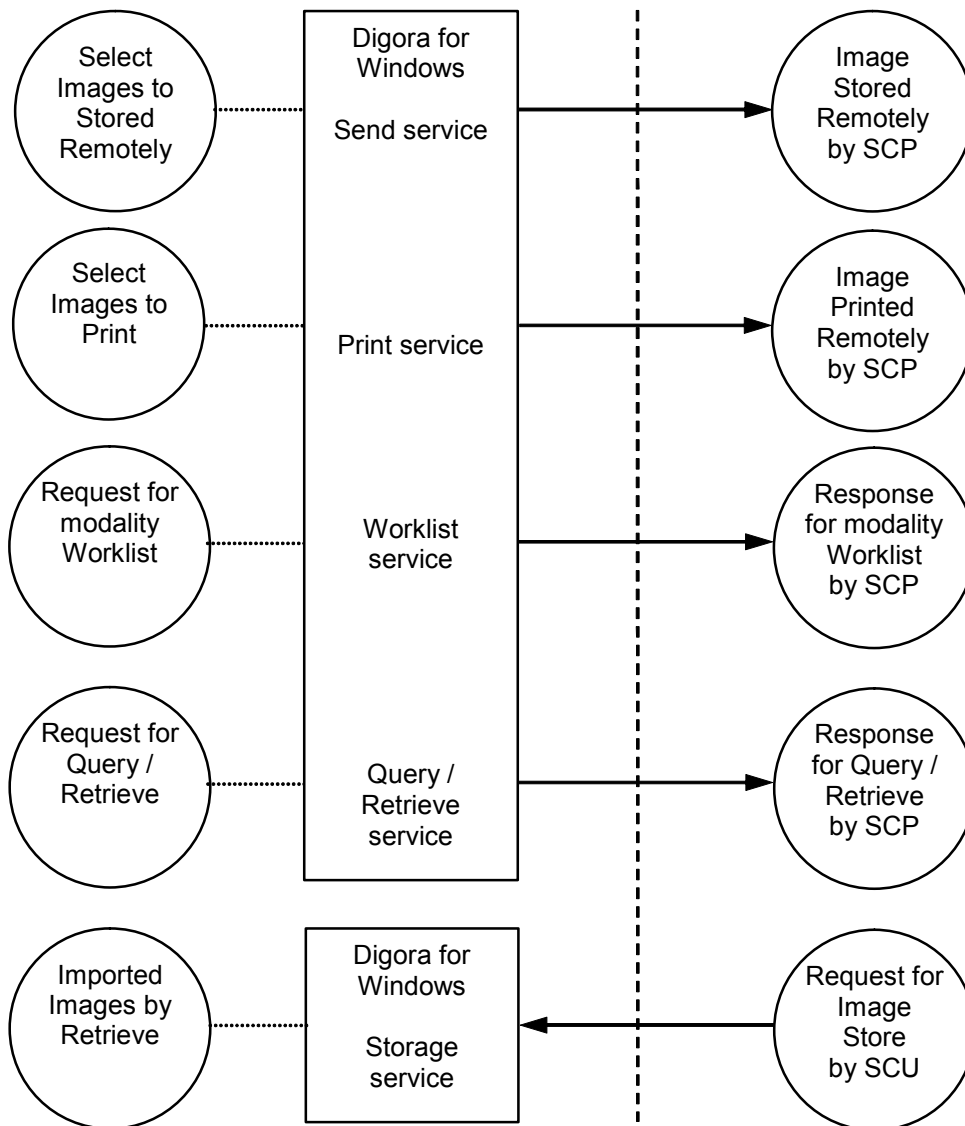


Figure 1: Implementation model

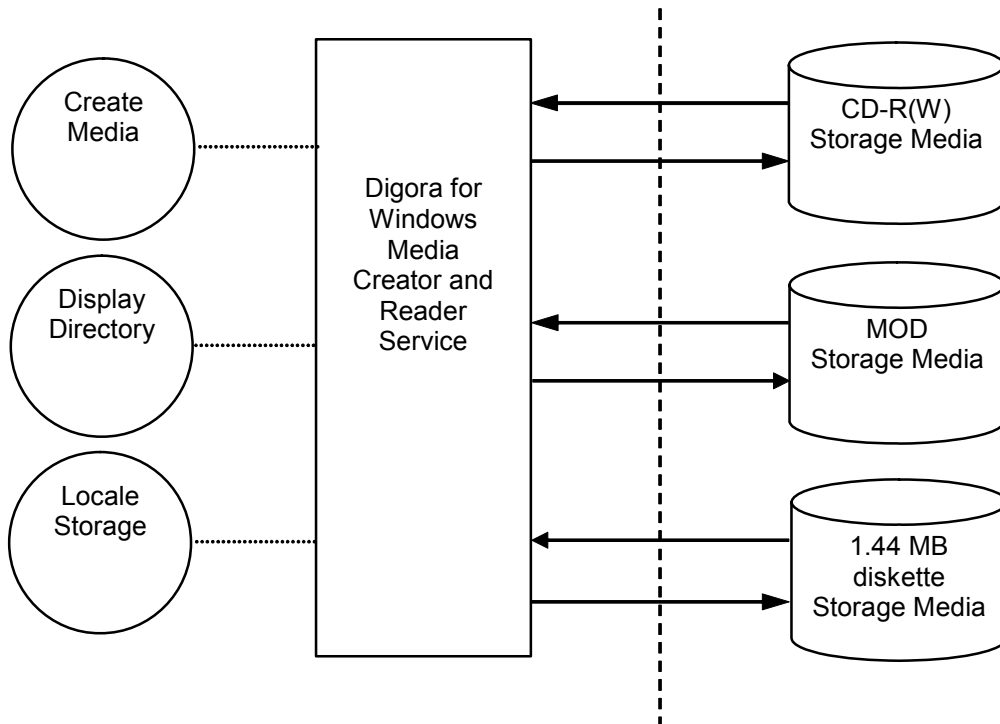


Figure 1: Implementation model (continued)

DFW DICOM services are implemented as running background processes. They start automatically during the system or the application startup and remain active until DFW application is quit. Storage service remains active after DFW stops.

2.2 Functional definition of AE's

The Application Entity of the DFW DICOM Service acts as an SCU for the

- Verification
- Storage
- Print
- Basic Worklist Management
- Query / Retrieve

The Application Entity of the DFW DICOM Service acts as an SCP for the

- Verification
- Storage

SOP classes.

The DFW DICOM Media Service can initialize Media by acting as an FSC to create a new DICOM File-set on CD-R, CD-RW, 230MB, 640MB, 1.2GB, 2.3GB MOD or 1.44 MB diskette media. It initializes the DICOM File-set and writes the specified SOP instances onto the CD-R, CD-RW, MOD or high-density floppy disk. Written SOP instances will be limited to instances that match the criteria of one of the Application Profiles that is supported.

The DFW DICOM Media Service can read Media by acting as an FSR to read created DICOM File-set on CD-R, CD-RW, 230MB, 640MB, 1.2GB, 2.3GB MOD or 1.44 MB diskette media. The read information is imported into the DFW Control Station local database.

The DFW DICOM Media Service will query the user before initializing media when a File-set is found on media and an initialize operation has been requested.

2.3 Sequencing of real-world activities

The media reading can only be performed on a piece of media that has already had a DICOM File-set created. There are no other sequencing constraints.

2.4 File Meta information for implementation class and Version

The DFW DICOM Media Service uses File Meta Information Version defined in [1] PS 3.10 and Classes UID defined in table below

Table 1: Media Storage SOP Classes

SOP Class Name	SOP Class UID
Basic Directory	1.2.840.10008.1.3.10
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1
Digital Intra-oral X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.3
Digital Intra-oral X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.3.1
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4

Implementation version name is defined in section 3.1.1.4 below in the document.

3. AE specifications

3.1 AE specification

The AE of the DFW DICOM Service provides standard conformance to the following DICOM v 3.0 SOP Classes as an SCU:

Table 2: SOP Classes as SCU

SOP Class Name	SOP Class UID
Basic Grayscale Print Management Meta	1.2.840.10008.5.1.1.9
Basic Color Print Management Meta	1.2.840.10008.5.1.1.18
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1
Digital Intra-oral X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.3
Digital Intra-oral X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.3.1
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4
Patient Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.1.1
Patient Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.1.2
Study Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.2.1
Study Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.2.2
Patient/Study Only Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.3.1
Patient/Study Only Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.3.2
Modality Worklist Management	1.2.840.10008.5.1.4.31

3.1.1 Association Establishment Policies

The DFW DICOM Service initiates associations for the following activities:

- The DFW user verifies the DICOM communication with a remote system.
- The DFW user sends images from the DFW local database to a remote system.
- The DFW user wants to print images via DICOM.
- The DFW user requests Modality Worklist from information system.
- The DFW user makes a patient, study or image data query from information system.
- The DFW user makes a patient, study or image data retrieving from information system

3.1.1.1 General

The configuration of the DICOM Service defines such parameters as

- Application Entity Title (AE Title)
- Host name
- Port number
- Possibly supported SOP Classes

for association with SCP(s). The DICOM Service will offer a maximum PDU size up to 65 kB (65 536 bytes) upon association initiation and accepts maximum PDU sizes up to 65 kB (65 536 bytes) on associations initiated by remote applications.

3.1.1.2 Number of associations

The DFW DICOM services support multiple associations such as SCU. When sending images DFW DICOM Services may start a new thread for images print association. Also during sending images and / or printing, a worklist query may be initiated. However multiple send, print or query jobs will be performed sequentially.

3.1.1.3 Asynchronous nature

The DFW DICOM Service does not support asynchronous operations and will not perform asynchronous window negotiation.

3.1.1.4 Implementation identifying information

The Implementation Class UID is: 1.2.246.512.1.2.0

The version name is: DFW_CS_104

3.1.1.5 Images Storage

3.1.1.5.1 *Associated real-world activity*

The user of DFW system initiates digital images storage on remote SCP from DFW software user interface.

3.1.1.5.2 *Proposed presentation contexts*

DFW DICOM Service supports the transfer syntaxes depicted in the table below:

Table 3: Transfer Syntaxes

Transfer Syntax	UID
Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2
Explicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2.1
Explicit VR Big Endian Transfer Syntax	1.2.840.10008.1.2.2

Table 4: Presentation Context Table

Abstract Syntax		Transfer Syntax	Role	Extended Negotiation
SOP Class	SOP Class UID			
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	All from Table 3	SCU	None
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1	All from Table 3	SCU	None
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	All from Table 3	SCU	None
Digital Intra-oral X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.3	All from Table 3	SCU	None
Digital Intra-oral X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.3.1	All from Table 3	SCU	None
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	All from Table 3	SCU	None
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	All from Table 3	SCU	None

3.1.1.5.2.1 SOP Specific Conformance Statement for Image Storage

The DFW DICOM Services provides standard DICOM conformance for Image Storage.

3.1.1.6 Images Print

3.1.1.6.1 *Associated real-world activity*

The DFW Control Station user selects the images to be printed in the user interface.

3.1.1.6.2 *Proposed presentation contexts*

DFW DICOM Service supports the transfer syntaxes depicted in tables below:

Table 5: Transfer Syntaxes

Transfer Syntax	UID
Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2
Explicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2.1
Explicit VR Big Endian Transfer Syntax	1.2.840.10008.1.2.2

Table 6: Presentation Context Table

Abstract Syntax		Transfer Syntax	Role	Extended Negotiation
SOP Class	SOP Class UID			
Basic Grayscale Print Management Meta	1.2.840.10008.5.1.1.9	All from Table 5	SCU	None
Basic Color Print Management Meta	1.2.840.10008.5.1.1.18	All from Table 5	SCU	None

3.1.1.6.2.1 SOP Specific Conformance Statement for Images Print

Basic Grayscale Print Management Meta SOP Class is defined by the following set of supported SOP Classes:

Table 7: Supported SOP Classes as Basic Grayscale Print Management Meta SOP class

SOP Class Name	SOP Class UID
Basic Film Session	1.2.840.10008.5.1.1.1
Basic Film Box	1.2.840.10008.5.1.1.2
Basic Grayscale Image Box	1.2.840.10008.5.1.1.4
Printer	1.2.840.10008.5.1.1.16

Table 8: Supported SOP Classes as Basic Color Print Management Meta SOP class

SOP Class Name	SOP Class UID
Basic Film Session	1.2.840.10008.5.1.1.1
Basic Film Box	1.2.840.10008.5.1.1.2
Basic Color Image Box	1.2.840.10008.5.1.1.4.1
Printer	1.2.840.10008.5.1.1.16

Print Management does not support any optional SOP Classes.

3.1.1.6.2.2 SOP Specific Conformance Statement for Basic Film Session

The DFW DICOM Service supports the following attributes in the N-CREATE for this class

Table 9: Attributes for Basic Film Session

Attribute Name	Tag	Default Value	Valid Range
Number of Copies	(2000,0010)	1	1..99
Print Priority	(2000,0020)	MED	HIGH, MED, LOW
Medium Type	(2000,0030)	PAPER	PAPER, CLEAR FILM, BLUE FILM
Film Destination	(2000,0040)	PROCESSOR	PROCESSOR, MAGAZIN, BIN_i
Film Session Label	(2000,0050)	DIGORA	User defined 16 characters

3.1.1.6.2.3 SOP Specific Conformance Statement for Basic Film Box

The DFW DICOM Service supports the following attributes in the N-CREATE for this class

Table 10: Attributes for Basic Film Box

Attribute Name	Tag	Default Value	Valid Range
Image Display Format	(2010,0010)	STANDARD\1,1	STANDARD\1,1 ⁽¹⁾
Film Orientation	(2010,0040)	PORTRAIT	PORTRAIT, LANDSCAPE
Film Size ID	(2010,0050)	8INX10IN	8INX10IN, 8_5INX11IN, 10INX12IN, 10INX14IN, 11INX14IN, 11INX17IN, 14INX14IN, 14INX17IN, 24CMX24CM, 24CMX30CM, A4, A3
Magnification Type	(2010,0060)	NONE	REPLICATE, BILINEAR, CUBIC, NONE
Border Density	(2010,0100)	WHITE	BLACK, WHITE, i, where 0..300
Min Density	(2010,0120)	0	0..300
Max Density	(2010,0130)	300	0..300
Trim	(2010,0140)	NO	YES, NO
Configuration Information	(2010,0150)	Pre-configured	Printer default

(1) DFW supports multiple images and annotations printing on one film. The image display format is defined by DFW system.

3.1.1.6.2.4 SOP Specific Conformance Statement for Basic Grayscale Image Box

The DFW DICOM Service supports the following attributes in the N-SET for this class

Table 11: Attributes for Basic Grayscale Image Box

Attribute Name	Tag	Default Value	Valid Range
Image Position	(2020,0010)	1	1 ⁽¹⁾
Polarity	(2020,0020)	NORMAL	NORMAL, REVERSE
Magnification Type	(2010,0060)	NONE	REPLICATE, BILINEAR, CUBIC, NONE
> Samples Per Pixel	(0028,0002)	1	
> Photometric Interpretation	(0028,0004)	MONOCHROME 1	MONOCHROME1, MONOCHROME2
> Rows	(0028,0010)	n/a	1..32767
> Columns	(0028,0011)	n/a	1..32767

(1) DFW supports multiple images and annotations printing on one film. The image position is defined by DFW system

3.1.1.6.2.5 SOP Specific Conformance Statement for Basic Color Image Box

The DFW DICOM Service supports the following attributes in the N-SET for this class

Table 12: Attributes for Basic Color Image Box

Attribute Name	Tag	Default Value	Valid Range
Image Position	(2020,0010)	1	1 ⁽¹⁾
Polarity	(2020,0020)	NORMAL	NORMAL, REVERSE
Magnification Type	(2010,0060)	NONE	REPLICATE, BILINEAR, CUBIC, NONE
> Samples Per Pixel	(0028,0002)	3	1,3
> Photometric Interpretation	(0028,0004)	RGB	PALETTE COLOR, RGB
> Rows	(0028,0010)	n/a	1..32767
> Columns	(0028,0011)	n/a	1..32767

(1) DFW supports multiple images and annotations printing on one film. The image position is defined by DFW system

3.1.1.6.2.6 SOP Specific Conformance Statement for Printer

The DFW DICOM Service accepts N-EVENT-REPORT and returns confirmation.

3.1.1.7 Worklist

3.1.1.7.1 Associated real-world activity

The DFW DICOM Service can make a query for a Modality Worklist to aid in merging patient demographics into DICOM images. This prevents the need to enter patient demographics manually and consequently eliminates a source of typing errors.

3.1.1.7.2 Proposed presentation contexts

The DFW DICOM Service supports the transfer syntaxes depicted in the table below:

Table 13: Transfer Syntaxes

Transfer Syntax	UID
Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2
Explicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2.1
Explicit VR Big Endian Transfer Syntax	1.2.840.10008.1.2.2

Table 14: Presentation Context Table

Abstract Syntax		Transfer Syntax	Role	Extended Negotiation
SOP Class	SOP Class UID			
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	All from Table 13	SCU	None

3.1.1.7.2.1 SOP specific conformance statement for SOP Class Modality Worklist Management
DFW DICOM service supports the following attributes as Matching Keys

Table 15: Modality Worklist Matching Keys

Module	Attribute name	Tag	Note
SOP Common	Specific Character Set	(0008,0005)	
Scheduled Procedure Step	Scheduled Procedure Step Sequence	(0040,0100)	
	> Scheduled Station AE Title	(0040,0001)	1
	> Scheduled Procedure Step Start Date	(0040,0002)	2
	> Scheduled Procedure Step Start Time	(0040,0003)	2
	> Modality	(0008,0060)	1
	> Scheduled Performing Physician's Name	(0040,0006)	
	> Scheduled Procedure Step Description	(0040,0007)	
	> Scheduled Station Name	(0040,0010)	
	> Scheduled Procedure Step Location	(0040,0011)	
	> Scheduled Protocol Code Sequence	(0040,0008)	
	> Pre-Medication	(0040,0012)	
	> Scheduled Procedure Step ID	(0040,0009)	
	> Requested Contrast Agent	(0032,1070)	
Requested Procedure	Requested Procedure ID	(0040,1001)	
	Requested Procedure Description	(0032,1060)	
	Requested Procedure Code Sequence	(0032,1064)	
	Study Instance UID	(0020,000D)	
	Referenced Study Sequence	(0008,1110)	
	Requested Procedure Priority	(0040,1003)	
	Patient Transport Arrangements	(0040,1004)	
Patient Identification	Patient's Name	(0010,0010)	
	Patient ID	(0010,0020)	
Patient Demographic	Patient's Birth Date	(0010,0032)	
	Patient's Sex	(0010,0040)	
	Patient's Weight	(0010,1030)	
	Confidentiality constraint on patient data	(0040,3001)	
Patient Medical	Patient State	(0038,0500)	
	Pregnancy Status	(0010,21C0)	
	Medical Alerts	(0010,2000)	

	Contrast Allergies	(0010,2110)	
	Special Needs	(0038,0050)	
Imaging Service Request	Accession Number	(0008,0050)	
	Requesting Physician	(0032, 1032)	
	Referring Physician's Name	(0008,0090)	
Visit Identification	Admission ID	(0038,0010)	
Visit Status	Current Patient Location	(0038,0300)	
	Referenced Patient Sequence	(0008,1120)	

Wildcard matching is used for the all keys

Note 1. Single value matching

Note 2. Range matching

DFW system receives and supports the following attributes

Table 16: Modality Worklist Management Attributes

Module	Attribute name	Tag	Note
SOP Common	Specific Character Set	(0008,0005)	
Scheduled Procedure Step	Scheduled Procedure Step Sequence	(0040,0100)	
	> Scheduled Station AE Title	(0040,0001)	
	> Scheduled Procedure Step Start Date	(0040,0002)	
	> Scheduled Procedure Step Start Time	(0040,0003)	
	> Modality	(0008,0060)	
	> Scheduled Performing Physician's Name	(0040,0006)	
	> Scheduled Procedure Step Description	(0040,0007)	
	> Scheduled Station Name	(0040,0010)	
	> Scheduled Procedure Step Location	(0040,0011)	
	> Scheduled Protocol Code Sequence	(0040,0008)	
	>> Code Value	(0008,0100)	
	>> Coding Scheme Designator	(0008,0102)	
	> Pre-Medication	(0040,0012)	
	> Scheduled Procedure Step ID	(0040,0009)	
> Requested Contrast Agent	(0032,1070)		
Requested Procedure	Requested Procedure ID	(0040,1001)	
	Requested Procedure Description	(0032,1060)	
	Requested Procedure Code Sequence	(0032,1064)	
	> Code Value	(0008,0100)	

	> Coding Scheme Designator	(0008,0102)	
	Study Instance UID	(0020,000D)	
	Referenced Study Sequence	(0008,1110)	
	> Referenced SOP Class UID	(0008,1150)	
	> Referenced SOP Instance UID	(0008,1155)	
	Requested Procedure Priority	(0040,1003)	
	Patient Transport Arrangements	(0040,1004)	
Patient Identification	Patient's Name	(0010,0010)	
	Patient ID	(0010,0020)	
Patient Demographic	Patient's Birth Date	(0010,0032)	
	Patient's Sex	(0010,0040)	
	Patient's Weight	(0010,1030)	
	Confidentiality constraint on patient data	(0040,3001)	
Patient Medical	Patient State	(0038,0500)	
	Pregnancy Status	(0010,21C0)	
	Medical Alerts	(0010,2000)	
	Contrast Allergies	(0010,2110)	
	Special Needs	(0038,0050)	
Imaging Service Request	Accession Number	(0008,0050)	
	Requesting Physician	(0032, 1032)	
	Referring Physician's Name	(0008,0090)	
Visit Identification	Admission ID	(0038,0010)	
Visit Status	Current Patient Location	(0038,0300)	
Visit Relationship	Referenced Patient Sequence	(0008,1120)	
	> Referenced SOP Class UID	(0008,1150)	
	> Referenced SOP Instance UID	(0008,1155)	

3.1.1.8 Storage SCP

3.1.1.8.1 Associated real-world activity

The DFW DICOM Service waits for a remote host to send image to DFW DICOM Service. The received images are stored in DFW databases.

3.1.1.8.2 Accepted presentation contexts

The DFW DICOM Service supports the transfer syntaxes depicted in the table below:

Table 17: Transfer Syntaxes

Transfer Syntax	UID
Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2
Explicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2.1
Explicit VR Big Endian Transfer Syntax	1.2.840.10008.1.2.2

Table 18: Presentation Context Table

Abstract Syntax		Transfer Syntax	Role	Extended Negotiation
SOP Class	SOP Class UID			
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	All from Table 17	SCP	None
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1	All from Table 17	SCP	None
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	All from Table 17	SCP	None
Digital Intra-oral X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.3	All from Table 17	SCP	None
Digital Intra-oral X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.3.1	All from Table 17	SCP	None
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	All from Table 17	SCP	None
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	All from Table 17	SCP	None

3.1.1.8.2.1 SOP specific conformance statement for Image Storage SOP Class

DFW DICOM stores all the elements that were received. Image will be transmitted with the same elements in which it was received.

3.1.1.9 Query/Retrieve SCU

3.1.1.9.1 Associated real-world activity

The DFW user requests a query to be performed. DICOM Service initiates C-FIND operation over an association. Based on the query result the DFW user may initiate the retrieving of the images. DICOM Service initiates C-MOVE operation.

3.1.1.9.2 Proposed presentation contexts

The DFW DICOM Service supports the transfer syntaxes depicted in the table below:

Table 19: Transfer Syntaxes

Transfer Syntax	UID
Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2
Explicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2.1
Explicit VR Big Endian Transfer Syntax	1.2.840.10008.1.2.2

Table 20: Presentation Context Table

Abstract Syntax		Transfer Syntax	Role	Extended Negotiation
SOP Class	SOP Class UID			
Patient Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.1.1	All from Table 19	SCU	None
Patient Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.1.2	All from Table 19	SCU	None
Study Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.2.1	All from Table 19	SCU	None
Study Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.2.2	All from Table 19	SCU	None
Patient/Study Only Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.3.1	All from Table 19	SCU	None
Patient/Study Only Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.3.2	All from Table 19	SCU	None

3.1.1.9.2.1 SOP specific conformance statement for Query/Retrieve SOP Class

DFW DICOM stores all the elements that were received. Image will be transmitted with the same elements in which it was received.

3.2 Media Storage AE Specification

The DFW DICOM Media Service provides Standard Conformance to the DICOM Media Storage Service and File Format [1] PS 3.10 and the Media Storage Application Profiles [1] PS 3.11 as far as reading and creation of uncompressed images on DICOM Storage Media is concerned.

Transfer Syntax for The DFW DICOM Media Service is defined in table below.

Table 21: Transfer Syntaxes

Transfer Syntax	UID
Explicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2.1

The supported Application Profiles, their Roles and the Service Class (SC) options are listed in table below

Table 22: Application Profiles, Activities and Roles

Application Profile	Identifier	Real World Activity	Role	SC Option
General Purpose DICOM Storage Media Image Interchange Profile for classes defined in Table 1	STD-GEN-CD	Display Directory	FSR	Interchange
	STD-GEN-FD			
	STD-GEN-MOD650			
	STD-GEN-MOD12			
	STD-GEN-CD	Create Media	FSC	Interchange
	STD-GEN-FD			
	STD-GEN-MOD650			
	STD-GEN-MOD12			
	STD-GEN-CD	Read Media	FSR	Interchange
	STD-GEN-FD			
	STD-GEN-MOD650			
	STD-GEN-MOD12			

3.2.1 File Meta Information

When File Meta Information is created the common DFW SCU source AE Title is used. Private information is not used in the application profile.

3.2.2 Real-World Activities

3.2.2.1 Display Directory

The DFW user inserts the media in the appropriate removable media device and invokes the media directory reading operation. Patients, their studies, series and images related information is visible in the DFW software user interface.

3.2.2.1.1 Media Storage Application profile for Display Directory

The DFW DICOM Media Service Application profile for Display Directory is defined in table below

Table 23: Presentation Context Table

Abstract Syntax		Transfer Syntax	Role	Service Class Option
SOP Class	SOP Class UID			
Basic Directory	1.2.840.10008.1.3.10	All from Table 21	FSR	Interchange
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	All from Table 21	FSR	Interchange
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1	All from Table 21	FSR	Interchange
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	All from Table 21	FSR	Interchange
Digital Intra-oral X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.3	All from Table 21	FSR	Interchange
Digital Intra-oral X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.3.1	All from Table 21	FSR	Interchange
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	All from Table 21	FSR	Interchange
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	All from Table 21	FSR	Interchange

3.2.2.2 Create Media

The DFW user inserts the media in the appropriate removable media device, selects in the software user interface images to be stored on the removable media and invokes the media create operation. Patients, their studies, series and images related information is stored on the media.

If the media already contains the information, DFW software warns the user about it.

3.2.2.2.1 Media Storage Application profile for Create Media

The DFW DICOM Media Service Application profile for Create Media is defined in table below

Table 24: Presentation Context Table

Abstract Syntax		Transfer Syntax	Role	Service Class Option
SOP Class	SOP Class UID			
Basic Directory	1.2.840.10008.1.3.10	All from Table 21	FSC	Interchange
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	All from Table 21	FSC	Interchange
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1	All from Table 21	FSC	Interchange
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	All from Table 21	FSC	Interchange
Digital Intra-oral X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.3	All from Table 21	FSC	Interchange
Digital Intra-oral X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.3.1	All from Table 21	FSC	Interchange
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	All from Table 21	FSC	Interchange
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	All from Table 21	FSC	Interchange

3.2.2.3 Read Media

The DFW user inserts the media in the appropriate removable media device and invokes the media reading operation. Patients, their studies, series and images related information is visible in the DFW software user interface.

After the user accepting the information from the software user interface, the information is stored in local DFW database.

3.2.2.3.1 Media Storage Application profile for Read Media

DFW DICOM Media Service Application profile for Read Media is defined in Table 23.

4. Augmented and Private Application Profiles

Not implemented.

5. Communication profiles

5.1 Supported communication stacks

The DFW DICOM Service provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM Standard.

5.2 OSI stack

Not supported.

5.3 TCP/IP stack

The DFW DICOM Service uses the TCP/IP stack from the Microsoft® Windows® operating system upon which it executes.

5.3.1 API

Not applicable.

5.3.2 Physical media support

The DFW DICOM Service is not dependent on the physical medium over which the TCP/IP functions.

5.4 Point-to-Point stack

Not supported.

6. Extensions/Specialization/Privatizations

6.1 Standard Extended/Specialized/Private SOPs

Not supported.

6.2 Private transfer syntaxes

Not supported.

7. Configuration

7.1 AE title / presentation address mapping

The Local AE Title is configurable. During installation a SOREDEX certified Service Technician must configure DFW DICOM Services.

7.2 Configurable parameters

The following fields are configurable for the AE (local):

- Local AE Title
- Listening TCP Port (port 104 is default port number)
- Local IP Address
- Station Name
- Max PDU size
- Timeout values
- Services priorities

The following fields are configurable for every remote DICOM AE:

- Remote AE Title
- Remote IP Address
- Remote listening TCP Port (port 104 is default port number)

8. Support of extended character sets

This implementation supports the following extended character set:

- ISO-IR 6 - default character set
- ISO-IR 13 - Japanese, JIS X 0201: Katakana
- ISO-IR 100 - Latin alphabet No. 1, supplementary set
- ISO-IR 144 - Cyrillic, supplementary set

9. Codes and controlled terminology

The SOP Classes supported by this implementation do not support the use of Codes and Controlled Terminology.

10. Security profiles

Not supported.